



Katrina Jones/R4/USEPA/US  
08/03/2009 11:16 AM

To: Debbie Jourdan/R4/USEPA/US@EPA  
cc  
bcc  
Subject: Fw: Carborundum Electro Minerals: Technical Review  
Comments Letter Report

----- Forwarded by Katrina Jones/R4/USEPA/US on 08/03/2009 11:16 AM -----



"Allyson Warrington"  
<AWarrington@otiesolutions.com>  
08/03/2009 10:12 AM

To: John Nolen/R4/USEPA/US@EPA  
cc: "Greg Kowalski" <GKowalski@otiesolutions.com>, Katrina  
Jones/R4/USEPA/US@EPA, Darryl  
Walker/R4/USEPA/US@EPA  
Subject: Carborundum Electro Minerals: Technical Review Comments  
Letter Report

Good Morning,

Attached is the Technical Review Comments Letter Report for the Carborundum Electro Minerals site. Comments were provided in response to TDEC's Revision 1 of the Site Inspection Report.

If you have any questions or comments, please contact me.

Sincerely,

*Allyson Warrington*

Senior Environmental Scientist  
U.S. EPA Region 4 START Site Assessment Coordinator



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Carborundum\_TN&A Review Comments\_August 2009.pdf



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August 3, 2009

Mr. John Nolen  
Remedial Project Manager  
U.S. Environmental Protection Agency, Region 4  
61 Forsyth Street, SW, 11th Floor  
Atlanta, Georgia 30303

**Subject:       Site Inspection Report, Revision 1**  
**Technical Assistance Review Comments**  
**Carborundum Electro Minerals**  
**EPA Contract No. EP-W-05-053**  
**Technical Direction Document (TDD) No. TNA-05-003-0042**

Dear Mr. Nolen:

The Oneida Total Integrated Enterprises-T N & Associates, Inc. (OTIE-TN&A), Superfund Technical Assessment and Response Team (START) is submitting one copy of the Technical Assistance and Review Comments for the Carborundum Electro Minerals (CEM) Site Inspection (SI) Report, Revision 1 prepared by the Tennessee Department of Environment and Conservation (TDEC) Division of Remediation.

Please contact me at (678) 355-5550, ext. 5709 or Greg Kowalski at (678) 355-5550, ext. 5704, if you have any questions regarding these technical review comments.

Sincerely,

Allyson Warrington  
START Site Assessment Coordinator  
Enclosure

cc:       Katrina Jones, EPA Project Officer  
          Darryl Walker, EPA Project Officer  
          Greg Kowalski, START Program Manager (w/o enclosure)  
          START File

## **Technical Assistance and Review Comments**

### **1.0 Introduction**

This document specifies the results of the Oneida Total Integrated Enterprises–T N & Associates, Inc. (OTIE-TN&A) technical assistance and review comments of the following report:

<b>Site Name:</b>	Carborundum Electro Minerals
<b>Document:</b>	Site Inspection Report, Revision 1 (dated September 15, 2008)
<b>Location:</b>	Caryville, Campbell County, Tennessee
<b>TN&amp;A Reviewer:</b>	Allyson Warrington/Stacy Kowalski
<b>Date of Review:</b>	July–August 2009

The Tennessee Department of Environment and Conservation (TDEC) Division of Remediation (DOR) intends to use this report as a Site Inspection (SI) Report, Revision 1 for the Carborundum Electro Minerals (CEM) site. The site is briefly described in Section 2. Section 3 explains the process used to review the SI Report, Revision 1 and general comments regarding the deliverable. The specific comments listed in Sections 4 through 10 are followed by the OTIE-TN&A recommendation for their resolution in italics.

### **2.0 Site Description**

CEM (the site) is located on Stone Mill Road in Caryville, Campbell County, Tennessee. The geographic coordinates of the facility are 36° 18' 32.9" (36.309°) North Latitude and 84° 11' 01.1" (84.184°) West Longitude, at the approximate center of the CEM manufacturing processes. The 136-acre property is now residential and is occupied for commercial, agricultural, and other industrial purposes. The immediate area surrounding the site is mixed industrial, commercial, agricultural, and residential.

### **3.0 General Comments**

The SI Report, Revision 1, for the CEM site, submitted to the U.S. Environmental Protection Agency (EPA) by TDEC, was reviewed for the following: completeness, consistency, the correct application of the Hazard Ranking System (HRS), logic, site characteristics, reference citation, and the correct application of the EPA Environmental Standard Operating Procedures and Quality Assurance Manual (EISOPQAM).

### **4.0 Issues**

#### **4.1 General**

*No figures or Global Positioning System (GPS) coordinates for field samples collected prior to the 2007 SI are included; therefore, it cannot be determined whether these sample locations can be included in the contaminated soil source.*

#### **4.2 Sources**

*General: When calculating the Hazardous Waste Quantity (HWQ), only the tier that generates the highest value should be used to score the site (or pathway). OTIE-TN&A recommends that evaluation of the other tiers be removed from the SI Report, Revision 1.*

*General: It is unclear from the SI Report, Revision 1 whether the "waste piles" located on the property are piles of concentrated wastes, or the result of excavation and are instead piles of contaminated soil. If the piles contain contaminated soil, the source category should be contaminated soil and not a pile. Additionally, no size or volume information is available for the waste piles.*

*The exact location (GPS or illustrated on a figure) and size of the trench used for burial of suspected hazardous substances is not available in the SI Report, Revision 1. If no samples have been collected from the trench to verify the constituents, and the size and location are unknown, this cannot be considered a source at this time.*

*The “New Pond” is not a source because it was not used as a surface impoundment during site operations; it was used to manage surface water runoff. If the pond is to be considered a source, it must be documented that the pond was used for wastewater management; it is insufficient to include this pond as a source because it “could also have been used...”*

*It is unclear whether the “Natural Pond” can be considered a source. Phrases such as “believed to be” are not sufficient to document a source. Surface impoundments must have been used to manage wastewater or other liquid wastes during the operational history of the site. Documentation of the pond’s purpose should be included for scoring purposes.*

*It is unclear whether or not the “Settling Pond” can be considered a source. The SI Report, Revision 1 states that the pond was constructed to handle surface water runoff from the site. Therefore, this pond is part of the surface water migration pathway and is not considered a source.*

*It is unclear as to why a 50-foot zone surrounding the firing stations is included in the area calculation for the “burn pit or pile” source (see Page 23 of 63). If the area is a pit, then the dimensions of the pit should be measured, not approximated. If the area is a pile, then the dimensions of the pile should be measured, not approximated. Alternatively, the area should be considered contaminated soil if there is no physical means of separating the firing station from the surrounding land surface. If this area is contaminated soil, then the samples should be collected from the outer edges of the area to document the size. One contaminated soil sample collected from the area is insufficient to document the size of this source unless there is a physical delineation on the land surface (like the edges of a pit or similar) or documentation of the area within the file material.*

*The “baghouse dust disposal area” waste quantity should be evaluated as an area and not a volume. The report states the “proposed contours” of the area, which is insufficient to evaluate the source as a volume. A conservative estimate of the source should be used. In this case, OTIE-TN&A calculated an area of 60,000 square feet (400 feet x 150 feet).*

*The "Horse Pen" is incorrectly evaluated as a pile (See Page 27 of 63). This source should be considered contaminated soil. To consider a pile as a source, it is required to have been used as part of the waste management process of the facility (see HRS Guidance Manual, p. 44, Highlight 4-1).*

*It is unclear where the 25-foot border for the "Cylinder Cooling" and "Thawing Shed" sources came from. In addition, two samples in a particular area create a line and are insufficient to evaluate an area for the source calculation. In order to determine the area for these sources, additional samples are needed in order to "connect the dots" and form an area. Additional samples are required since it cannot be assumed that the entire footprint is contaminated.*

*TDEC states that "little is known" about the purpose of the "Solution Pumphouse" area. If the purpose and waste disposal practices of the "Solution Pumphouse" area are unclear, the source cannot be considered a pile. A pile must be formed during waste management operations.*

*Not enough information is presented in the SI Report, Revision 1 to consider the "Turntable" area as a pile. Please see all previous comments regarding the definition of a pile and other source definitions.*

*The contaminated soil source is double counting sources that have already been evaluated. This is an incorrect application of the HRS Rule.*

#### **4.3 Tier Evaluations**

*Tier A Evaluation: Carbon monoxide is not listed in the Superfund Chemical Data Matrix (SCDM) and should not be used to evaluate the site. Because the buildings and operations are no longer active at the site, the current source is the contaminated soil that contains the particulates from the operations, not the gasses produced 40 years ago. Additionally, the mass balance calculation is incorrect since the atomic weight of carbon is 12, not 32. Estimations are insufficient to allow for the calculation of Tier A.*

*Tier B Evaluation: Carbon monoxide is not listed in SCDM and should not be used to evaluate the site. Estimations are insufficient to allow for the calculation of Tier B.*

#### **4.4 Groundwater Pathway**

*No groundwater wells are documented in the area. No municipal water is supplied by groundwater wells. All drinking water is supplied by a surface water intake. Therefore, the Groundwater Pathway score equals zero.*

#### **4.5 Soil Exposure Pathway**

*The Soil Exposure Pathway does not allow for potential residential targets. No residences are present on the source areas; therefore the Residential score = 0.*

*The nearby threat score should be based on potential contamination since no samples have been collected from nearby residential yards within 200 feet of the home.*

*The exact location of nearby residential soil samples, if collected, is unclear. For a soil sample to represent a nearby target value, the sample must have been collected from a depth of 0 to 24 inches and from a location within 200 feet of the residential dwelling. This information is not clearly stated; therefore, no residential targets can be assessed at this time without proper documentation that the samples meet all criteria for the soil exposure pathway.*

*The population for all distance categories up to 1-mile is not listed in the report for verification of the calculated site score.*

#### **4.6 Surface Water Migration Pathway**

*The exact population served by the municipal surface water intake is not included within the SI Report, Revision 1. This information is crucial to evaluating the Surface Water Migration Pathway correctly. Additionally, due to the proximity of the surface water intake, it is unclear why a sample was not*

*collected at the intake during the investigation. Since a sample has not been collected at the intake, all drinking water targets must be evaluated as potential targets and multiplied by 0.1.*

*If there is not an observed release to the Cave Springs surface water, the Surface Water Pathway should be evaluated on the Potential to Release.*

*The mileage of wetlands frontage is not listed in the report for verification of the site score calculation.*

#### **4.7 Air Pathway**

*The population for all distance categories in the 4-mile Target Distance Limit (TDL) is not listed in the report to verify correct calculations in the site score.*

*The acreage of wetlands within the 4-mile TDL is not listed for verification of the calculation of the site score.*

#### **5.0 Conclusion**

*Based on the information presented in the SI Report, Revision 1 and Quickscore, OTIE-TN&A blindly calculated a site score for CEM. OTIE-TN&A failed to generate an appreciable site score above the cutoff for listing on the NPL; therefore, OTIE-TN&A disagrees with the site score calculation for CEM as presented by TDEC. EPA will determine further action for the site.*